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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/757,175	01/09/2001	Pang-Chia Lu	10234-2	1308

23455 7590 08/29/2003

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EXAMINER
CHANG, VICTOR S

ART UNIT	PAPER NUMBER
1771	

DATE MAILED: 08/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/757,175	LU ET AL.	
	Examiner	Art Unit	
	Victor S Chang	1771	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 July 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-27 and 29-38* is/are pending in the application.

4a) Of the above claim(s) *8-27 and 37* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7,29-36 and 38* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. The Examiner has carefully considered Applicant's amendments and remarks filed on 7/30/2003. Applicant's amendments to the claims 1, 8, 31 and 38 have all been entered.

2. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

3. Rejections not maintained are withdrawn. In particular, Applicants' argument that "Swan necessarily requires the presence of both a voided core layer and at least one voided skin layer" (Remarks, page 10, second full paragraph) is persuasive. As such, rejection over Swan individually is withdrawn.

Claim Rejections - 35 USC § 112

4. Claims 1-7, 29-36 and 38 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. Voids in the core layer is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976).

More particularly, in independent claims 1, 31 and 38, last second line of each claim, the recitation "each layer of said film is substantially free of voids" is in excess of the disclosure and renders the claim unduly broad, i.e., it is necessary for the multilayered opaque film of the instant invention to have a core layer with microporous

voids (Specification, pages 6-7, bridging paragraph). For the purpose of this Office action, it is presumed that only the skin and transition layers are free of voids.

Response to Amendment

5. Claims 1-7 are rejected under 35 U.S.C. 102(b) as being anticipated by Park (US 4758462).

Park's invention is directed to an opaque, biaxially oriented film structure comprising an expanded thermoplastic polymer matrix core layer within which is a strata of voids and at least one void-free thermoplastic skin layer affixed to a surface of the core layer, said skin layer(s) being of a thickness such that the outer surfaces thereof do not, at least substantially, manifest the surface irregularities of said core layer (Abstract).

For claim 1, Park also expressly teaches that by adding light absorbing colored pigment in the nonexpanded skin of an expanded core film, the light transmission reduced, i.e., the opacity is improved (column 3, lines 38-45).

For claim 2, Park teaches that the expanded thermoplastic polymer matrix core layer comprises at least one void-initiating particle which is phase distinct and incompatible with the matrix material, the void space occupied by said particle being substantially less than the volume of said void, with one generally cross-sectional dimension of said particle, at least approximating a corresponding cross-sectional dimension of said void (column 2, lines 4-11).

For claims 3-5 and 7, Park teaches in Example 2 that 2.8 wt% TiO_2 was added to a core layer comprising isotactic polypropylene (column 6, lines 32-48).

For claim 6, Park teaches that at suitable temperature polybutylene terephthalate (PBT) spheres is used as void-initiating particles (column 4, lines 27-30, and column 5, lines 39-41).

Claims lack novelty.

6. Claims 29-36 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Park (US 4758462).

The teachings of Park are again relied upon as set forth above.

For claim 29, it is believed that substituting isotatic polypropylene with an alternative polyolefin such as high density polyethylene is within the skill of the art. Note also as evidence of the state of the art Ambroise (US 5500265) which discloses an opaque multilayer film based on substantially the same technology as taught by Swan, and teaches that the core layer may instead be high density polyethylene (column 3, lines 4-5).

For claim 30, although Park lacks an express teaching that the core layer comprises calcium carbonate, it is believed that calcium carbonate particles can be equally used in the core layer as void-initiating particles as well. Note also as evidence of the state of the art Keller (US 5091236) which discloses an opaque multilayer film based on substantially the same technology as taught by Park, and teaches that the void-initiating particles of the core layer can be any suitable organic or inorganic material which is incompatible with the core material at the temperature of biaxial

orientation such as polybutylene terephthalate and calcium carbonate, etc. (column 6, lines 3-10).

For claim 31, although Park does not expressly teach the transition or intermediate layer(s) in a multilayer film, it is believed that incorporating a transition layer such as tie layer is common and well known to one skilled in the art, motivated by the desire to improve the adhesion between the layers.

For claims 32-35 and 38, although Park does not expressly teaches a second skin and second transition skin, it is believed that forming second skin and/or second transition layer by a multilayer coextrusion process is old and conventional to one of ordinary skill in the art of multilayered film, motivated by the desire to obtain a smooth surface on the second surface of the core layer and to enhance the adhesion between the layers.

For claim 36, although Park is silent about the opacity of the skin layer, it is believed that adjusting the amount of light absorbing colored pigment, a suitable opacity of the skin layer is either inherently disclosed or an obvious optimization to one skilled in the art.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Victor S Chang whose telephone number is 703-605-4296. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel H Morris can be reached on 703-308-2414. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

VSC

DANIEL ZIRKER
PRIMARY EXAMINER
GROUP ~~1300~~ 1700

Daniel Zirker